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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,088	02/24/2000	Koichi Horikawa	Q57985	5415

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EXAMINER

WON, MICHAEL YOUNG

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 07/02/2004

17

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/512,088

Applicant(s)

HORIKAWA, KOICHI

Examiner

Michael Y Won

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Claim 11 has been added. Claims 1-11 have been examined and are pending with this action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1-3 and 6-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Williams, A.; **MPOA: routing multiple protocols over ATM**, IP Routing Versus ATM

Switching - What Are the Real Issues? (Digest No: 1997/334), IEE Colloquium on, 19 Nov. 1997, Pages: 2/1 - 2/5.

As per claim 1, Williams teaches a method for transferring MPOA packets in an ATM network (see title), the method comprising; determining by an MPOA server (see pg.2/4, 6th paragraph: "MPOA server, or Route Server") which has received an address resolution (see pg. 2/4, 4th paragraph: "process of mapping IP destination address to a proxy ATM destination address is generally referred to as address resolution") request packet ("see pg.2/4, 3rd paragraph: "IP frame") from an MPOA client (see pg.2/4, 4th paragraph: "MPOA client") whether or not said address resolution request packet is to be forwarded to another MPOA server or another MPOA client based on layer 3 packet filter information (see pg.2/2, 6th paragraph; pg.2/4, 3rd-8th paragraph; and pg.2/5, 3rd paragraph).

As per claims 2, Williams teaches of further comprising: transmitting by said MPOA client a source layer 3 address of the data packet that is to be a short cut, said source layer 3 address being added as an extension to the MPOA address resolution request packet (implicit: see pg.2/4 3rd-5th and 8th paragraphs); and determining by said MPOA server whether or not said MPOA address resolution request packet is to be forwarded to the other MPOA server or the other MPOA client based on said source layer 3 address placed in the extension and a destination layer 3 address in the MPOA address resolution request packet received from said MPOA client, after verifying the layer 3 packet filter information (see claim 1 rejection and pg.2/4, 8th paragraph).

As per claim 3, Williams teaches of further comprising: said MPOA client notifying a source layer 3 address processor (see pg.2/4, 8th paragraph: "edge switch") by a client MPOA packet processor (processors are implicit) in said MPOA client (see pg.2/4, 2nd and 4th paragraphs: "MPOA client function is embedded in the edge switches and also in the ATM NIC cards") of a MPOA address resolution request operation and a source layer 3 address information (see pg.2/4, 3rd paragraph and pg.2/5, 3rd paragraph); said MPOA client judging by the source layer 3 address processor about whether or not an outer instruction of said MPOA address resolution request operation directs including the source layer 3 address in the MPOA packet extension (implicit by means of pg.2/4, 3rd paragraph); and said MPOA client transmitting to an MPOA server by a client MPOA packet transmitting portion the MPOA address resolution request packet with the MPOA packet extension added at said client MPOA packet processor (see pg.2/4, col.8: "client will forward an IP frame towards the network").

As per claim 6, Williams teaches a system for transferring multi-protocol over asynchronous transfer mode (MPOA) packets in an asynchronous transfer mode (ATM) network (see title); said system including a server (see pg.2/4, 6th paragraph: "MPOA server, or Route Server"), the server comprising: an MPOA packet receiving portion configured to receive an address resolution (see pg. 2/4, 4th paragraph: "process of mapping IP destination address to a proxy ATM destination address is generally referred to as address resolution") request packet ("see pg.2/4, 3rd paragraph: "IP frame") request packet from an MPOA client (see pg.2/4, 4th paragraph: "MPOA client"); and an

MPOA packet processor (implicit) configured to determine, based on layer 3 packet filter information, whether or not the address resolution request packet is to be forwarded, the forwarding being directed toward at least one of another MPOA server and another MPOA client (see pg.2/2, 6th paragraph; pg.2/4, 3rd-8th paragraph; and pg.2/5, 3rd paragraph).

As per claim 7, Williams further teaches wherein the MPOA client is configured to transmit a source layer 3 address of the data packet that is to be a short cut, the source layer 3 address being added as an extension to the MPOA address resolution request packet, and said MPOA server is configured to determine, based on the source layer 3 address placed in the extension and a destination layer 3 address in the MPOA address resolution request packet received from the MPOA client, whether or not the MPOA address resolution request packet is to be forwarded, after verifying the layer 3 packet filter information (see claim 2 rejection above).

As per claim 8, Williams teaches of further comprising: the MPOA client configured to notify a source layer 3 address processor by a client MPOA packet processor in the MPOA client of a MPOA address resolution request operation and a source layer 3 address information; the MPOA client configured to judge by the source layer 3 address processor whether or not an outer instruction of said MPOA address resolution request operation directs including the source layer 3 address in the MPOA packet extension; and said MPOA client configured to transmit to an MPOA server by a client MPOA packet transmitting portion the MPOA address resolution request packet

with the MPOA packet extension added at the client MPOA packet processor (see claim 3 rejection above).

As per claim 11, Williams teaches a method for transferring MPOA packets in an ATM network (see title), the method comprising: a determination step of determining by an MPOA server (see pg.2/4, 6th paragraph: "MPOA server, or Route Server") which has received an address resolution (see pg. 2/4, 4th paragraph: "process of mapping IP destination address to a proxy ATM destination address is generally referred to as address resolution") request packet ("see pg.2/4, 3rd paragraph: "IP frame") which includes a source layer 3 address (implicit by means of pg.2/4, 3rd paragraph) from an MPOA client (see pg.2/4, 4th paragraph: "MPOA client"), whether or not said address resolution request packet is to be forwarded to another MPOA server or another MPOA client based on layer 3 packet filter information (see pg.2/2, 6th paragraph; pg.2/4, 3rd-8th paragraph; and pg.2/5, 3rd paragraph), wherein said source layer 3 address is held in an extension of said address resolution request packet (implicit: see pg.2/4 3rd-5th and 8th paragraphs) so as to allow an MPOA server which is incapable of performing said determination step to communicate said address resolution request packet with said MPOA client (see pg.2/4, 8th paragraph).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4, 5, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams, A.; **MPOA: routing multiple protocols over ATM**, IP Routing Versus ATM Switching - What Are the Real Issues? (Digest No: 1997/334), IEE Colloquium on, 19 Nov. 1997, Pages: 2/1 - 2/5 in view of Huey et al. (US 5467349 A).

As per claims 4, 5, 9 and 10, Williams teaches of further comprising: a MPOA packet receiving portion of said MPOA server receiving the MPOA address resolution request packet from said MPOA client (see claim 1 rejection above); a MPOA packet processor of said MPOA server checking about whether or not the source layer 3 address is included in the received MPOA address resolution request packet (implicit); and when said source layer 3 address is included, said server MPOA packet processor obtaining the source layer 3 address and a destination layer 3 address (implicit); (see .

Williams does not explicitly teach of said server MPOA packet processor judging whether or not to permit passage; a layer 3 filter retrieving portion retrieving a layer 3 filter information using said source layer 3 address and said destination layer 3 address as the key; and directing the execution of error processing, wherein when passage of said filter is not permitted, directing the execution of processing for forwarding the received MPOA address resolution packet to the other MPOA server or the other MPOA

client, wherein the error processing is a process for transmitting the MPOA packet which indicates that the address resolution has been failed toward the MPOA client.

Huey teaches of said server MPOA packet processor judging whether or not to permit passage (see abstract and col.5, lines 1-5); a layer 3 filter retrieving portion retrieving a layer 3 filter information using said source layer 3 address and said destination layer 3 address as the key (see abstract; Fig.5; Fig.8; and col.5, lines 4-35); and error processing, wherein when passage of said filter is not permitted, directing the execution of processing for forwarding the received MPOA address resolution packet to the other MPOA server or the other MPOA client (see col.4, lines 13-21), and wherein the error processing is a process for transmitting the MPOA packet which indicates that the address resolution has failed towards the MPOA client (see Fig.9b, #132, and col.8, lines 25-29).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to employ the teachings of Huey within the system of Williams by implementing a filtering means and an error processing method within the packet transfer over ATM method and system, because Williams teaches of resolving a proxy ATM address (see pg.2/4, 8th paragraph) and Huey teaches of resolving an address by means of a filter for address processing. Furthermore error processing increases elimination of idle data packets thereby reducing delay and increasing throughput and processing time which are one of the essential benefits of implementing MPOA as

taught by Williams (see pg.2/3, 7th paragraph: "that performance needs to be ubiquitous; no bottlenecks are allowed").

Response to Arguments

4. In response to the argument regarding claim 1 and in particular the element of "determining... whether or not to said address resolution request packet is to be forwarded to another... based on layer 3 packet filter information", clearly Williams teaches this limitation by a combination of reference locations (see pg.2/2, 6th paragraph; pg.2/4, 3rd-8th paragraph; and pg.2/5, 3rd paragraph). The examiner does not cite pg.2/4, 6th paragraph to teach limitation, but rather this citing was to explicitly teach of an "MPOA server".

In pg.2/2, 6th paragraph, Williams teaches that the system is implemented in "network layer (OSI Layer 3) switching function". In pg.2/4, 3rd-8th paragraphs, Williams reiterates communication in Layer 3 protocol. The IP frame which clearly employs all communication within the MPOA environment incorporates an "address resolution" "towards the network", whereby in the worst case scenario, the edge switch will query the route server to **resolve** a proxy ATM address, thus creating a *shortcut* or *fast-path* where "all subsequent packets with the same IP destination address will be sent on this ATM path".

Furthermore, to resolve any ambiguities, Williams clearly teach, "process of mapping destination address to a proxy ATM destination address is generally referred to

as address resolution" (see pg.2/4, 4th paragraph). Thus the means by which Williams determines ATM address by address resolution request packet is clearly implicit with the combination of references provided. In other words it is clear an address resolution is encapsulated in the IP frame.

5. In response to the argument that Williams fails to teach determining where **not** to forward the request for an ATM, it is inherent that if the system determines where to forward to, clearly it is determining where **not** to forward.

6. Therefore, claims 1-11 remain rejected. Further amendment to the claim language to clearly define the novelty of the invention is suggested.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

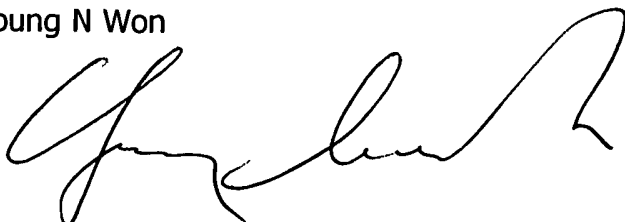
the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y Won whose telephone number is 703-605-4241. The examiner can normally be reached on M-Th: 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T Alam can be reached on 703-308-6662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Young N Won



June 29, 2004



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PRIMARY EXAMINER